Appendix E
Baseline Development Standards

ESA

DISCUSSION AND VALIDATION REGARDING
APPLICATION OF THE FOOTHILL/TRABUCO SPECIFIC PLAN DEVELOPMENT STANDARDS
TO THE SADDLE CREST PROJECT SITE
May 2011

OBJECTIVE OF THIS DOCUMENT

The objective of this document is to describe a site plan that adheres to the regulations set forth in the Foothill/Trabuco Specific Plan (F/TSP). The purpose for creating the plan (i.e., the "Baseline Plan") is to provide a foundation for the conclusion that the strict application of F/TSP development standards and design guidelines yields a site plan that is environmentally inferior to the proposed project.

In order to validate that conclusion, a site plan has been prepared for the Saddle Crest site with the objective of analyzing the feasibility of achieving the allowed F/TSP residential allocation of 65 single family dwelling units, while at the same time adhering to the development standards and design guidelines of the F/TSP (see Exhibit 1). The following discussion describes how the Baseline Plan was conceived. The discussion below concludes that the Baseline Plan, within a very narrow band of variation, is the only feasible method of achieving the dwelling unit count authorized by the F/TSP in the context of adhering to the restrictive development standards and design guidelines of the F/TSP.

The Baseline Plan could be implemented on the Saddle Crest project site without seeking amendments to F/TSP. However, based on current environmental regulations, it is unlikely that the Baseline Plan would receive approvals from the Resource Agencies and/or the Orange County Fire Authority.

The Baseline Plan and its associated analyses will ultimately be included within an Environmental Impact Report (EIR) that will be prepared for the proposed Saddle Crest project. The EIR for Saddle Crest will equally evaluate the potential environmental impacts associated with the proposed project and the Baseline Plan in order to provide an objective environmental evaluation of the Saddle Crest project in relation to the Baseline Plan.

The project applicant is requesting amendments to the F/TSP to implement its proposed Saddle Crest project. The requested F/TSP amendments relate, in general, to the development standards for the Upper Aliso Residential (UAR) District (within which Saddle Crest is located) and to the design guidelines for the overall F/TSP area. These amendments are necessary to develop the proposed Saddle Crest project, because it is based on a clustered or conventional development scenario.

Based on completing in-depth site analyses, which included the preparation of a range of technical studies (including geology, oak tree, biology, fire management, hydrology, etc.), the project applicant asserts that the proposed Saddle Crest project is environmentally superior to a Baseline Plan that could be implemented on the project site without amending the F/TSP, and, therefore, the proposed amendments to the F/TSP are justified.

EXISTING REGULATORY CONTEXT

The F/TSP was adopted by the Orange County Board of Supervisors almost twenty years ago (in December 1991). The stated "...purpose of the Specific Plan effort was to set forth goals, policies, land use district regulations, development guidelines and implementation programs in order to preserve the area's rural character and to guide future development in the Foothill/Trabuco area" (p. I-1).

With respect to the UAR District, the stated purpose (p. III-45):

> ...is to provide for the development and maintenance of low density, single family residential development in a manner that is rural in character and compatible with areas of steep to gently sloping terrain and significant biological resources. It is an objective of these regulations to encourage innovative hillside community design by allowing residential development which is sensitive to the terrain and natural resources.

The "Purpose and Intent" of the Development and Design Guidelines includes the following (p. IV-1):

> Further, these Guidelines serve to encourage individual property owners to develop innovative and creative design solutions which result in rural hillside development that is sensitive to the diverse terrain and significant biological habitat. It is the intention of these Guidelines to preclude conventional solutions to hillside development, including large-scale, mass grading and creation of large, flat residential building pads typical of flatland development.

From the above excerpted purpose statements, then, it is clear that the overall philosophy of the F/TSP is that the "rural character" of the F/TSP area can be preserved by "precluding conventional solutions to hillside development" while at the same time being "sensitive" to "significant biological habitat".

The F/TSP seeks to preserve "rural character", however, without defining it. During a Planning Commission public hearing on a previous F/TSP amendment that was initiated by the County but not completed, a November 4, 1998 staff report states the following: "...it should be noted that although the terms 'rural' and 'rural character' are often used to described objectives of the F/TSP, they are not defined in the Specific Plan. Furthermore, most dictionaries define 'rural' as including agriculture. But agriculture is prohibited currently by the F/TSP."

Adhering to the development standards and design guidelines that were promulgated to implement the overall philosophy of the F/TSP results in a "cookie cutter" approach to providing home sites whereby ranchettes would be sprinkled throughout the entire Saddle Crest project site (as verified by the Baseline Plan.

The ability of this quilt-patterned ranchette approach to be "sensitive" to "significant biological habitat" was questioned during the November 4, 1998 Planning Commission public hearing, with the staff report stating:

> In special situations, the goals and objectives of the Specific Plan may be better accomplished if more clustering is allowed. For example, clustering may allow a developer to avoid remedial grading and grading for roads that would otherwise be necessary and result in adverse impacts on biological resources and natural landforms. Also, the adverse impacts on biological resources and natural landforms due to Fire Code requirements for fuel modification...could be significantly reduced by clustering.

Since the adoption of the F/TSP almost twenty years ago, the scientific community's understanding of the ecosystem has greatly evolved. Current scientific wisdom does not hold that "precluding conventional solutions to hillside development" is necessarily the way to be "sensitive" to "significant biological habitat". In fact, the current wisdom of watershed and habitat planning, as well as fire management, holds that large blocks of undeveloped land, as reflected in the Saddle Crest project, may well be the best way to be "sensitive" to "significant biological habitat" (as documented in the Biological Resources Assessment and the Fire Behavior Analysis and Report prepared for the proposed Saddle Crest project).

PARAMETERS FOR DEVELOPMENT OF BASELINE PLAN

The Baseline Plan was conceived as a vehicle for comparison of the environmental merits/impacts of the Saddle Crest project with those of the Baseline Plan. In order to make a credible comparison between the Saddle Crest project and the Baseline Plan, the Baseline Plan's formulation reflected three key considerations:

1. First, the F/TSP identifies a maximum number of dwelling units that are permitted on each parcel within the Specific Plan area (indicated on Appendix B: Statistical Summary of the F/TSP). For the Saddle Crest project site, 65 single family residences are identified. Therefore, in order to have the ability to undertake an "apples to apples" comparison between Saddle Crest and the Baseline Plan, 65 single family residences are identified on both plans.

2. Second, since the rationale for the Baseline Plan is to document compliance with the F/TSP, the Baseline Plan had to be formulated such that it complied with ALL the UAR District Regulations, as well as the applicable Development and Design Guidelines that can be reflected at a site plan level of detail (i.e., grading, drainage, site planning and fuel modification). Guidelines related to streetscape, architecture and landscaping, which are applicable to any project within the F/TSP, while not addressed at a site plan level of detail, would be reflected at a later stage of project refinement.

Likewise, the requirements of the Resource Component of the F/TSP, which addresses wildlife corridors, oak woodlands, streambeds and visual resources are addressed only insofar as they are applicable to the site plan level of detail. Mitigation of environmental impacts is not addressed here. Further, as with any project envisioned on the Saddle Crest project site, the Baseline Plan would be required to be permitted by several outside agencies (including the Orange County Fire Authority and the Regional Water Quality Control Board). Outside agency plan review and permitting processes are not addressed here.

3. Finally, the formulated Baseline Plan had to be technically feasible from a civil engineering standpoint. Technical feasibility includes consideration of sound civil engineering practices, where design is compliant with the adopted standards of reviewing and permitting agencies, while at the same time maintaining public safety and creating viable building sites. The Baseline Plan has been reviewed by a civil engineer to confirm its technical viability. Additionally, the Baseline Plan had to be technically feasible from a geotechnical standpoint. The Baseline Plan, including the backbone road system, slopes, and pads for future home sites, was reviewed by the project geologist and determined to be feasible from a geotechnical viewpoint.

It is acknowledged that utilization of these three parameters in and of themselves do not result in the only possible Baseline Plan. Utilizing the same constraints, one land planner may well represent the Baseline Plan in an alternate configuration. However, the range of potential site plans is relatively narrow and is limited by a few key considerations, resulting in insignificant variations on a generalized development envelope, as documented in detail below.

FORMULATION OF THE BASELINE PLAN

The F/TSP provisions were utilized to create a Baseline Plan for a neighborhood consisting of 65 single-family residences. In addition, other components of the proposed project (including an attended entry feature and a water tank serving the community) are included in the Baseline Plan.

That draft Baseline Plan was then "reality checked" against sound civil engineering practices with reference to the geotechnical considerations on the Saddle Crest project site. Below is the step-by-step process utilized (which would be applicable to the formulation of any version of a Baseline Plan).

The overall Saddle Crest project site contains 113.6-acres. While allowing for fuel modification and other limited activities, the UAR District Regulations require the preservation of "...a minimum of sixty-six (66) percent of the site in permanent, natural open space". Therefore, once 75 acres (i.e., 66% natural open space) is removed from the overall 113.6-acre project site, development can only occur on 38.6 acres of the project site (i.e., the "buildable area").

Within the UAR District, the F/TSP (p. III-52) states:

> No grading, structures (including stables and corrals), walls (except for river rock walls not to exceed three feet), fences (except open fencing) or commercial agricultural activities shall be permitted in the natural open space area. Fuel modification shall be permitted within said open space areas if required by the Fire Chief in conjunction with an approved Fuel Modification Plan; however, the development should be designed so that fuel modification impacts to the open space areas are minimized.

On past occasions, however, the Planning Commission and Board of Supervisors have interpreted the restriction on grading in open space areas to mean that no grading is permitted after the initial development is completed. In a November 21, 2005 internal County memorandum (from Frank McGill to Tim Neely), this confusion regarding grading in open space areas is discussed as follows: "During initial development, grading in open space areas may be approved by the Planning Commission for such purposes as removing geologic hazards, erosion control and correcting earlier illegal grading. However, once the development is completed, such areas are to have a natural looking appearance in terms of landform and vegetation. This matter has been debated...with almost every project."

The Planning Commission, in fact, attempted to rectify this confusion years earlier in an aborted F/TSP amendment of 1998-9 process (staff report of May 12, 1999) by clarifying that limited grading in open space areas during initial development could be approved by the Planning Commission as follows (note that the concept of environmental superiority is also addressed):

> Grading is prohibited in open space areas dedicated or to be dedicated in compliance with the Resources Overlay Component unless 'a' and 'b' below are satisfied, except as provided in 'c' below:
>
> a. Grading shall be specifically provided for in a Planning Commission approved area plan, site development permit, or use permit and be for one or more of the following purposes:
> 1. To correct geological hazards
> 2. For fuel modification for new development per the Fire Code
> 3. For tree relocation or replacement...
> 4. For driveway access
> 5. For erosion control and drainage control
> 6. For underground utilities
> 7. To correct earlier illegal grading
> 8. For outdoor uses approved by the Planning Commission...
>
> b. At the completion of grading, overall, the area graded shall have a natural-looking appearance and be environmentally equivalent or superior to its original state thereafter.
>
> c. Notwithstanding 'a' above, the following situations shall only require a grading permit per the Grading Code:

1. Remedial grading to correct recent acts of nature in order to comply with the requirements of the Grading Code and Fire Code for public safety purposes. Such grading shall not be related to new development.
2. Grading for County approved fuel modification required for public safety purposes but not related to new development.
3. Grading related to County of Orange requirements for public benefits or environmental enhancements. Examples include local park development, NCCP implementation, riding & hiking trail improvements, and improvements to native plant and animal habitats.

Since it is not clear what grading in open space areas would be allowed, the Baseline Plan assumes that all 75 acres (66% of the site) of the "natural open space" remains in an undisturbed, natural condition.

Within the 38.6-acre generalized development envelope, the F/TSP grading standards for the UAR District are the biggest constraint to the narrow range of potential baseline site plans. The grading standards are complicated, and are, therefore, discussed in detail below.

F/TSP Grading Regulations Drive the Design

The grading standards of the F/TSP are the driving force for the design of the Baseline Plan and are summarized in the table below (see also Exhibits 2-4):

F/TSP Grading Requirements for the UAR District

Controlling Grading Standard Category	F/TSP Grading Standard
QUANTITIES (Refers to Maximum Average Cubic Yards of Grading	
Building site (pad) and driveway serving one building site	3,000 cubic yards, average
Roads and Driveways serving 2 or more building sites	Not specified, therefore not limited
Remedial grading (as certified by a geologist)	Not specified, therefore not limited
SLOPE HEIGHT (refers to maximum vertical height of exposed cut or fill slope	
Building site (pad) and driveway serving one building site	Ten (10) feet
Roads and Driveways serving 2 or more building sites	Thirty (30) feet
CONTOUR ELEVATION CHANGE (refers to the maximum height that the existing ground can be altered, above ground [fill] or below ground [cut]. Can also be described as the height difference between the proposed and existing contour elevations)	

Building site (pad) and driveway serving one building site	Ten (10) feet
Roads and Driveways serving 2 or more building sites	Not specified, therefore not limited

The grading standards of the F/TSP are not conducive to conventional flat pad construction (i.e., home on one level with full flat yard areas) in the steep, hilly terrain of the Saddle Crest project site. When the F/TSP grading standards are applied to the Saddle Crest terrain, the result is typically the creation of no pads (or small sliver pads), necessitating uphill and downhill homes, where either all or a portion of the building footprint is built over or into sloped terrain. Flat, gentle, or rolling terrain permits flat pad or split pad construction, depending on the extent of the natural slope pitch/angle.

The majority of the Saddle Crest project site is hilly and steep, approaching very steep in some areas, particularly the northeast portion of the project site. In this sort of terrain, the most restrictive of the three controlling grading factors (i.e., quantities, slope height and contour elevation change) is the contour elevation change. In order to comply with the 10-foot limit, building sites must be confined to three general areas:

- Ridge tops, or similar high points, such as plateaus or terraces
- Canyon bottoms, or similar low points
- Side slopes of ridges and canyons where the steepness of the natural slope permits

The road system and adjacent building sites follow and use these three general area types, so it is the natural location of these areas on the project site that dictates the layout of the Baseline Plan, as discussed below.

Grading Regulations and Terrain Drive Configuration of the Road Network

Application of the F/TSP grading standards to the steep terrain of the Saddle Crest project site results in the use of more grade-adaptive road design and geometry (with the road system bending to be more molded to the natural terrain) than would occur with the application of conventional grading standards. This is because to comply with the F/TSP grading standards, roads must follow/respond to the natural terrain to a greater extent (i.e., be more grade adaptive), than if the artificial grading limitations of the F/TSP were not in place. Grade-adaptive road design minimizes grading and results in:

1. Steeper local roads with longer runs of grades exceeding 10-12% (maximum conventional grade for longer runs is 10%).

2. Local roads with tighter turns (less than conventional 250' curve radius).

3. Greater use of single and common driveways to respond to the steep terrain where driveways are permitted a narrower pavement width, steeper grades and reduced curve radii.

Grading Regulations and Terrain Compel the Use of Retaining Walls to Support Main Access Road

Retaining walls are used to support roads and common driveways in steeper terrain where a conventionally-manufactured slope would exceed the maximum permitted height of 30 feet. In the project area, retaining wall usage applies to the main access road system. These walls are adjacent to the road, either on the uphill side, downhill side, or both. Retaining walls are either Loffel walls (earth retention system) or solid/block vertical walls. Retaining wall heights are limited to six feet by the F/TSP. However, staggered walls can be used, in combination with planter strips between the walls, where no single wall exceeds six feet and the combination of walls does not exceed the F/TSP maximum of twenty feet. The use of retaining walls adjacent to roads is a common practice when grading standards are applied to steeper terrain, as is evidenced in other F/TSP projects (see Exhibit 16).

Grading Regulations and Terrain Drive Potential Housing Pad Configurations

In order to define potential housing pads for the Baseline Plan, the standards summarized in the "F/TSP Grading Requirements for the UAR District" table above were applied to the 38.6-acre project site that constitutes the "buildable area" (see Exhibit 1). The "buildable area", therefore, is the area of allowed disturbance. The site planning effort for creation of the Baseline Plan has resulted in two distinct areas of disturbance within the "buildable area" – the backbone system area and the lot-specific area.

The majority of the buildable area consists of the backbone system, including grading for all roads and driveways, pads, slopes, water quality control/stormwater detention basins and other utilities. In addition, a portion of this area is allocated to each private lot, and reserved for the homeowner or homebuilder to construct a home, ancillary structures, improvements such as yards and use areas (which can entail additional grading) and other types of disturbance such as gardens, orchards, storage areas, etc. These areas of permissible disturbance are reserved for a defined zone, known as the "lot disturbance area", within the overall (minimum one-acre-acre) lot (see Exhibits 5, 17 and 18).

Because the 38.6-acre buildable area contains other types of disturbance such as roads and slopes, there is a limit on the acreage available for all lot disturbance areas, and thus for each individual lot. Despite this, the Baseline Plan ensures that lot disturbance areas are of adequate size that they afford the homeowner some flexibility in siting the home and yard areas. The configurations of the lot disturbance areas are designed to maximize the usability of land given the constraints of terrain and resources. The boundaries follow the front and side yard setbacks at the front of the lot, and may deviate towards the back of the lot to take into account terrain and resources, on a lot-by-lot basis.

When defining the lot disturbance area in the three generalized areas identified above (i.e., ridge tops/similar high points, canyon bottoms/similar low points or side slopes of ridges and canyons), four general types of building sites (listed below) are possible, the most common of which is uphill or downhill home sites with narrow sliver pads (see Exhibits 6-10 and 15). Generally, the steeper the terrain, the further down the list one moves (although there was an attempt made to incorporate as many flat pad building sites into the Baseline Plan as possible). The narrowness of the sliver pads, or the ability to create pads at all, is mainly governed by the ten-foot contour elevation change limitation. In order to create a wider pad that is more conventional, the alteration of the natural terrain, up or down, would need to exceed ten feet, which is not permitted by the F/TSP.

The four general types of sites are:

- Flat pad, where possible (home and yard are built on one level)
- Split pad, where possible (home and yards are built, usually on two levels (but can be more), with split height typically ranging five to ten feet)
- Uphill or downhill home, with narrow sliver pad (home can be built on multiple levels)
- Uphill or downhill, with no pad (i.e., slope terminates at road edge; home can be built on multiple levels)

Uphill homes are generally built into the natural slope, using stepped foundations. The slope is often excavated to provide space for the floors (see Exhibits 9-11). The extent of excavation depends on the steepness of the slope, the amount of flat distance between the toe of the slope and the road right-of-way, and the number, size and configuration of the floors. Sliver pads allow for flat area for a garage/carport, entry, etc. Yard space is typically sloped along the sides, and can be sloped, flat or terraced at the rear depending on the terrain and further grading alterations by a homeowner to create flat yard areas. Retaining walls can be used to create flat rear yard space. A vertical building envelope controls the massing of the house relative to the slope it is built on (per Orange County Zoning Code - see Exhibit 8). In order for the floors of the house to avoid penetrating the envelope, they must step up or down the slope on multiple levels. This creates the multi-level pads typical for an uphill home.

Downhill homes are generally of two types, either pole/stilt construction, or stepped foundation (see Exhibits 6, 9 and 10 and Exhibits 12-15). Either can require piles, caissons, etc., depending on the geologic conditions. While uphill homes are built into the slope, downhill homes are usually built onto or over the slope. For stepped foundations, excavation can also occur as in uphill homes, the extent of which is governed by the steepness of the slope, the amount of flat distance between the toe of the slope and the road right-of-way and the number, size and configuration of the floors. Sliver pads allow for flat area for a garage/carport, entry, etc. Yard space is typically sloped along the sides, and can be sloped, flat or terraced at the rear depending on the terrain and further grading alterations. Retaining walls can be used to create flat rear yard space. The same vertical building envelope and massing controls that apply to uphill homes also apply to downhill homes (see discussion above).

Grading Standards and Terrain Drive the Design for Northeast Portion of Site

In order to provide 65 home sites within the project boundaries, any conceived Baseline Plan would have to include home sites in the northeast portion of the project site. The inclusion of home sites in this area is a function of maintaining the required F/TSP average one-acre building site, while providing for the backbone system of roads and driveways, pads, slopes, water quality control/stormwater detention basins and other utilities. Under any design, the backbone system would consume approximately the same amount of acreage, leaving insufficient acreage to accommodate sixty-five building sites (averaging one acre) in the western portion of the project site. Therefore, the balance of building sites is distributed in the northeast portion of the project site.

The northeast portion of the Saddle Crest project site contains a narrow canyon with high, steep sides, and a "major streambed" as designated in the F/TSP. The limits of what constitutes a major streambed are not specifically defined by the F/TSP. Instead, the F/TSP requires confirmation of these limits by a hydrologist. Since a hydrology study will not be completed for the Baseline Plan, for purposes of this analysis, the ACOE jurisdictional limits are used to define the boundary of the "major streambed".

At the south end of the narrow canyon within the northeast portion of the Saddle Crest site, another streambed joins from the east (which, although subject to permitting requirements of other public agencies, is not designated as a major streambed by the F/TSP). As reflected in the Baseline Plan, together these two areas contain a total of eight building sites served by two roads. In order to avoid the major streambed, as required by the F/TSP, the main road is perched on the slopes above.

The major streambed is crossed two times using arched culverts to minimize impacts (streambed crossings are permitted by the F/TSP, see p. II-19: "...minimize the need for man-made structures which would alter the natural condition of any designated streambed"). A third crossing using an arched culvert occurs over a tributary to the major streambed.

In order to construct the main road in this steep terrain, retaining walls are used, in many cases on both sides of the road. The location of building sites in this area is limited to areas where the terrain is flatter or to where there are breaks in the retaining walls. The number of building sites within the northeast area is limited because it is not feasible to construct building sites in areas where high retaining walls support the backbone road in both the uphill and downhill condition. Home construction in both the uphill condition and the downhill condition are described below:

1. Uphill Condition: To build an uphill home, a section of uphill retaining wall along the road for the width of the home would need to be removed. Removal of a section of wall would leave a near-vertical face of earth starting from the road right-of-way. Excavating back into the slope for the foundation and floors would entail starting with a wall of earth versus the toe of a sloped hill. With a sloped hill, excavation is minimized with a foundation constructed to step up the slope. However, when excavating into a near-vertical face of earth, a home's foundation must

be pushed further into the slope to the point that the design of the home is compromised and construction costs can be prohibitive. For example, the earthwork is considerable, side and rear walls become retaining walls, windows cannot be placed on the lower floors and flat rear yard space is non-existent. The depth of required excavation is further increased by the height and steepness of the natural slopes in the northeast area coupled with the required front setback from the road right-of-way.

2. Downhill Condition: In every case where a downhill wall is required to support the road, the toe of the wall is in proximity to the limits of the major streambed. The footprint of the home would be built out over the retaining wall and either stepped down with a stepped footing until the base of the slope is reached, or extended outward and be elevated by poles/stilts embedded into the base of the slope. With the provision of the required front setback from the road right-of-way, the footprint of the home and the stepped foundation or stilt/pole contact points would intrude into the limits of the major streambed. The extent of intrusion would increase if the home were to enjoy the use of any side or rear yard areas. Because the major streambed cannot be disturbed to this extent, building site placement and construction over downhill walls is precluded.

Besides the limitations on home placement in the northeast area of the project site resulting from the uphill and downhill retaining wall conditions along the backbone road, liability and long-term maintenance issues on the part of the homeowner are also considerations in the placement of homes along these walls. For example, if a section of road wall is removed, the homebuilder or homeowner would need to ensure that the slope is stabilized (i.e., held back) during construction so no failure occurs onto the road. This is particularly critical in a downhill wall condition where the wall is holding back earthen fill in the road, in which case failure could mean the collapse of a section of road. Because the northeast area is served by a common driveway, a failure could affect the safety of several homeowners who all would be using the road. In addition to construction liability issues, there are also potential long term maintenance responsibilities that result when an uphill home's retaining and stepped foundation walls and drains are tied into those of the road wall, or when a downhill home is built over a road wall with the wall under the home and possibly incorporated into the home's foundation. In either case, a portion of these systems must be maintained by homeowner.

BASELINE PLAN – COMMENTARY AND SUMMARY OF IMPACTS

Consideration of all the factors discussed in detail above guided the formulation of the Baseline Plan. As previously mentioned, the Baseline Plan could have been represented in an alternate configuration utilizing the same constraints and design considerations. However, the range of potential configurations is relatively narrow and would yield insignificant variations on a generalized development envelope.

Specifically, the Baseline Plan was designed to take advantage of areas with potential for building while meeting F/TSP grading standards and regulations, including resource avoidance. However, another plan

may seek to utilize slightly different areas, resulting in some variation in the alignment of the supporting spine road and connecting driveways. Also, the exact project entry location and access road up the front slope facing Santiago Canyon Road could vary somewhat. Even with these and other minor variations, any site plan would encounter the same engineering challenges. The F/TSP grading standards force roads into repetitive high and low spots and force the use of retaining walls in steeper terrain, creating, for example, the need for smaller internal water quality control/stormwater detention basins and sewage lift stations (to pump to high spots and gravity flow to Santiago Canyon Road).

In the end, any site plan would have generally the same extent of road network across approximately the same acreage of the site, with the same approximate distance of roads and driveways, governed by maintaining 65 building sites and maintaining the minimum and average lot sizes prescribed by the F/TSP development standards.

Any baseline plan would also have the same general appearance in terms of the development pattern, with fingers of development consisting of narrow bands of roads/driveways and adjacent home sites spread over the project site, and pockets of open space between these fingers. A good example is The Oaks at Trabuco, an existing custom-lot residential development within the F/TSP area that was constructed utilizing the F/TSP grading standards (See Exhibits 17 and 18).

In summary:

- The Baseline Plan has a sprawling road/driveway system and building sites over the entire Saddle Crest project site, versus a clustered plan on a portion of the project site as reflected by the proposed project.

- The Baseline Plan has greater impacts to biological resources (see Biological Resources Assessment for detailed impact-by-impact comparisons) than those associated with the Saddle Crest project.

- The Baseline Plan results in greater fragmentation of open space by creating open space pockets, not large blocks of contiguous open space, resulting in less open space connectivity than provided by the proposed project for the Saddle Crest site.

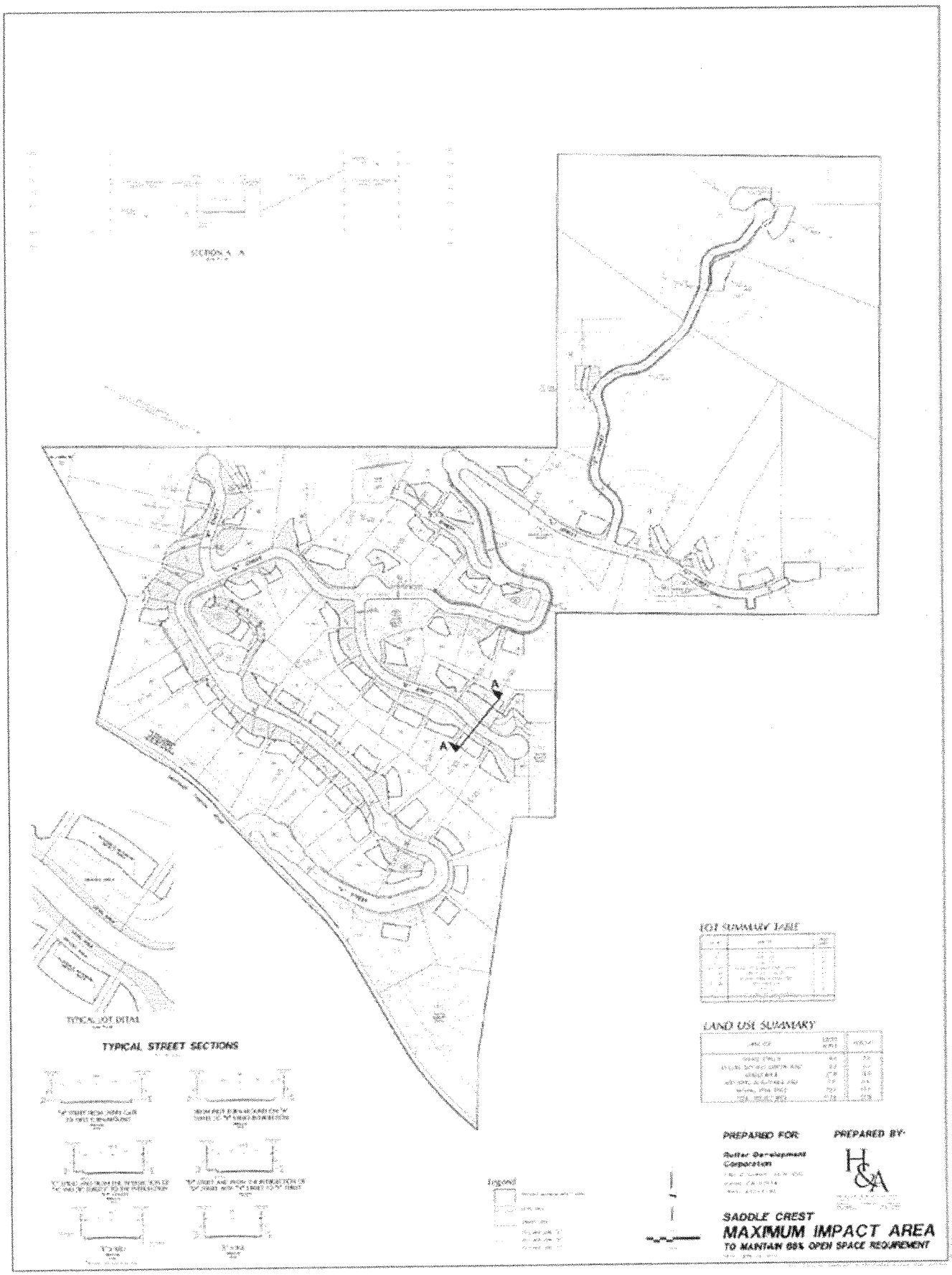
- The Baseline Plan allows for fencing of pockets of open space (for open space areas within individual lots), disrupting wildlife movement.

- The Baseline Plan has the potential for unauthorized additional impacts to open space areas, as homeowners will tend to disturb/encroach outside the allowed limits of the buildable area. These actions typically occur in rural and semi-rural areas and are difficult for the County to enforce. While this potential also exists for the Saddle Crest project, it would relate to at most

ten home sites which interface with open space areas, as opposed to almost all 65 of the home sites created for the Baseline Plan. Some of these uses could include:

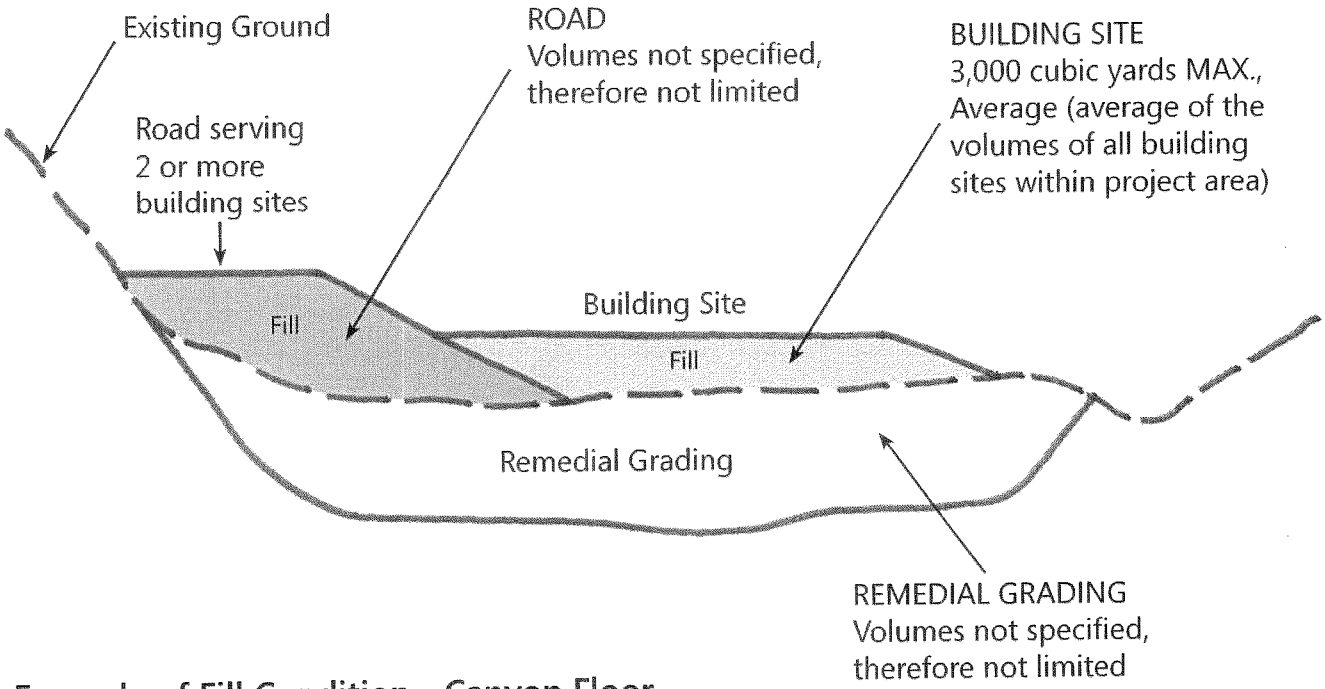
- Auxiliary structures, such as storage sheds
- Storage areas
- Accessways, trails
- Active and passive yard areas
- Animal pens, dog runs, etc.
- Pools, jacuzzis, patios, decks, gazebos, etc.
- Gardens, landscaped areas, orchards

- The Baseline Plan has a fire defense system that is hindered by the community design that results from application of the F/TSP grading standards to the project site. Specifically, more areas of the Baseline Plan are exposed to expanses of wildlands, and the length of the roadway system is greater, thereby potentially reducing fire response times. Further, steep road grades exceeding 10% over longer runs, and tight turning radii, both features of the Baseline Plan, affect fire response times.

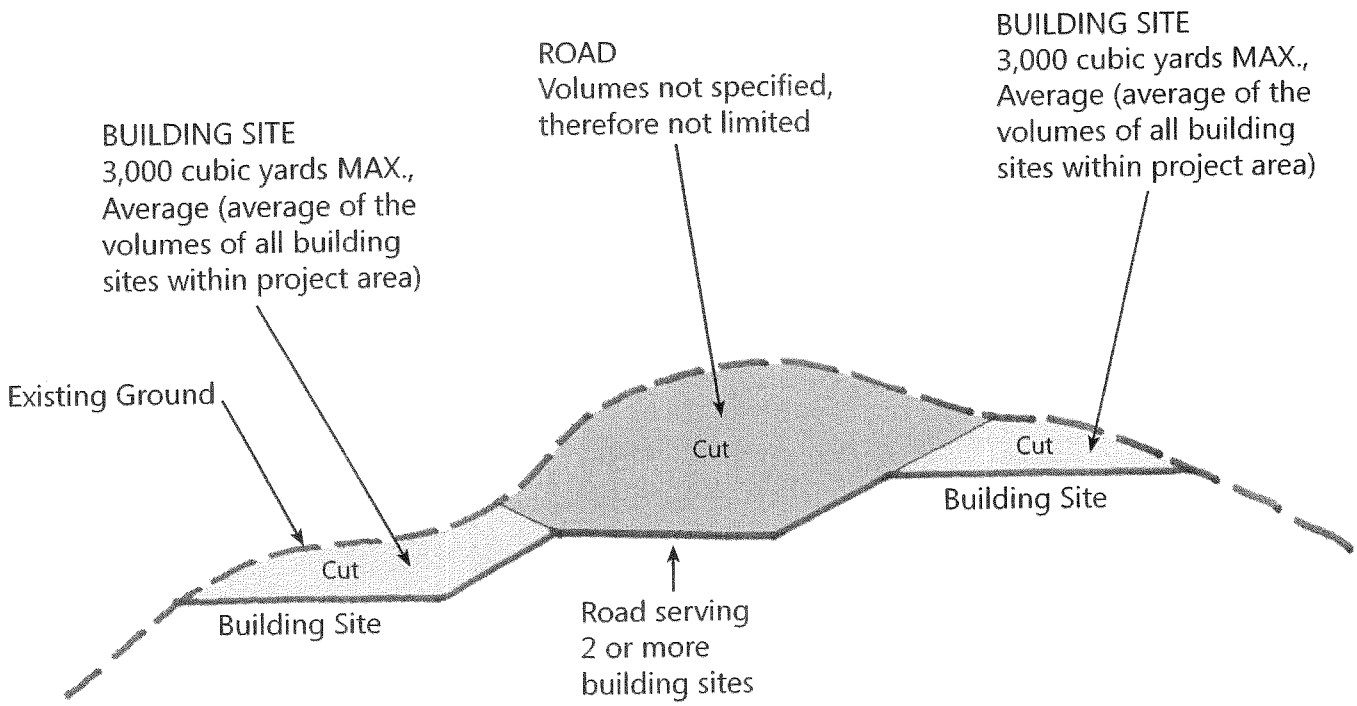


Baseline Grading Plan - Saddle Crest Project

Exhibit 1



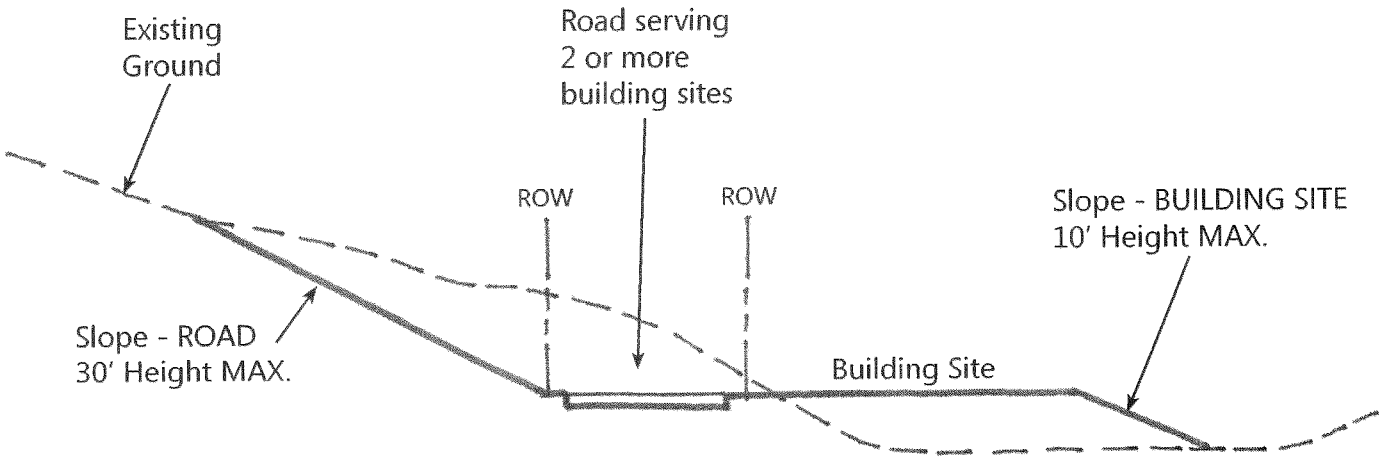
Example of Fill Condition - Canyon Floor



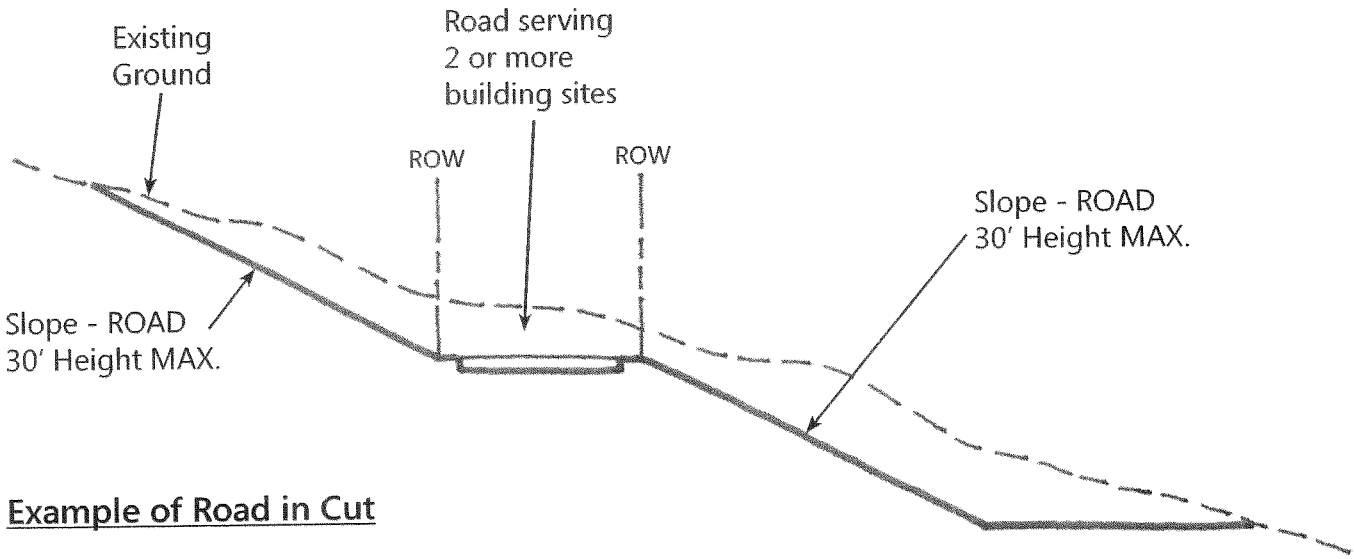
Example of Cut Condition - Ridge

EXAMPLE CONDITIONS
F/TSP Grading Standards - Grading Quantities

Exhibit 2



Example of Road in Cut, Building Site in Fill

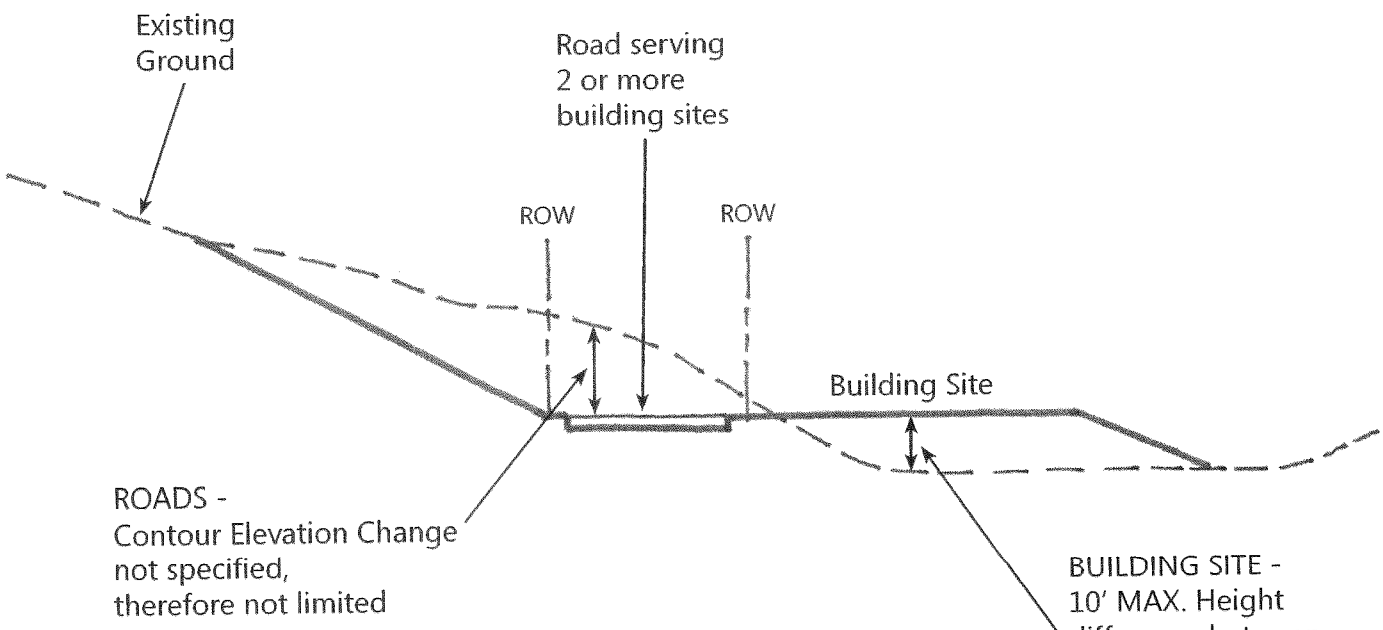


Example of Road in Cut

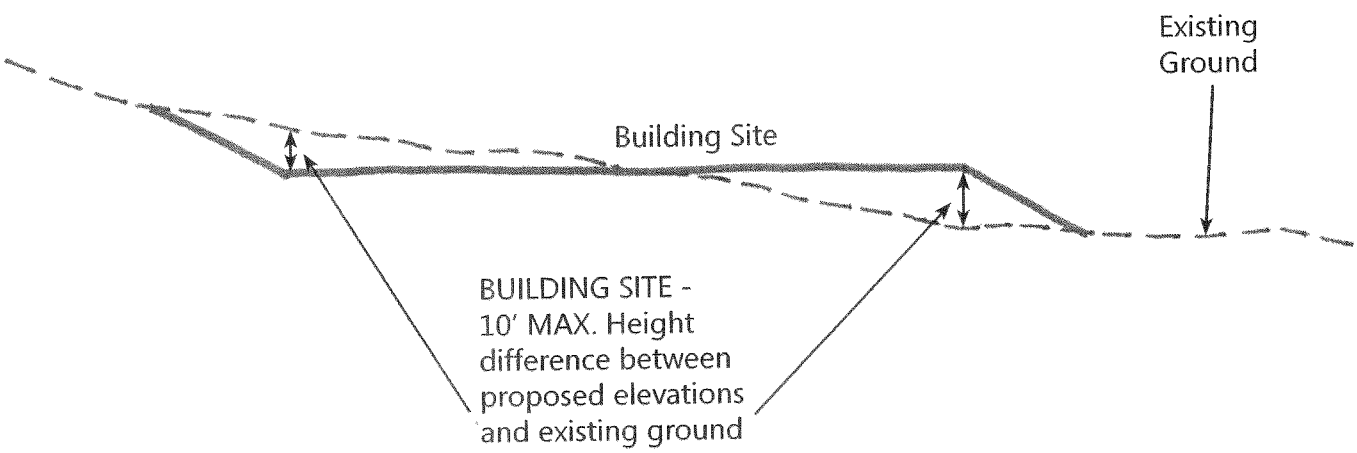
Example of Flat Pad Building Site in Cut and Fill

EXAMPLE CONDITIONS
F/TSP Grading Standards - Slope Height

Exhibit 3



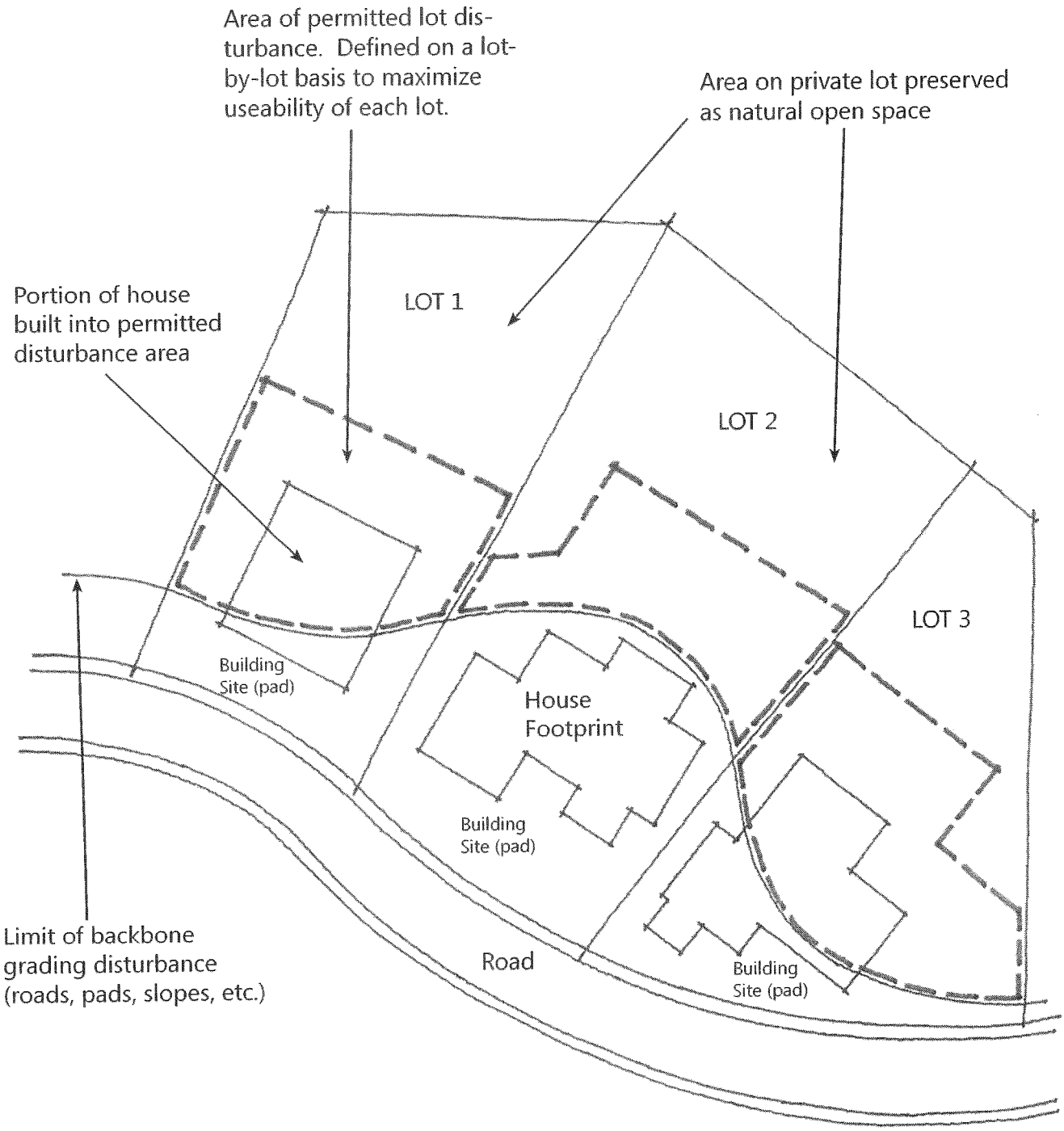
Example of Road in Cut, Building Site in Fill



Example of Flat Pad Building Site in Cut and Fill

EXAMPLE CONDITIONS
F/TSP Grading Standards - Contour Elevation Change

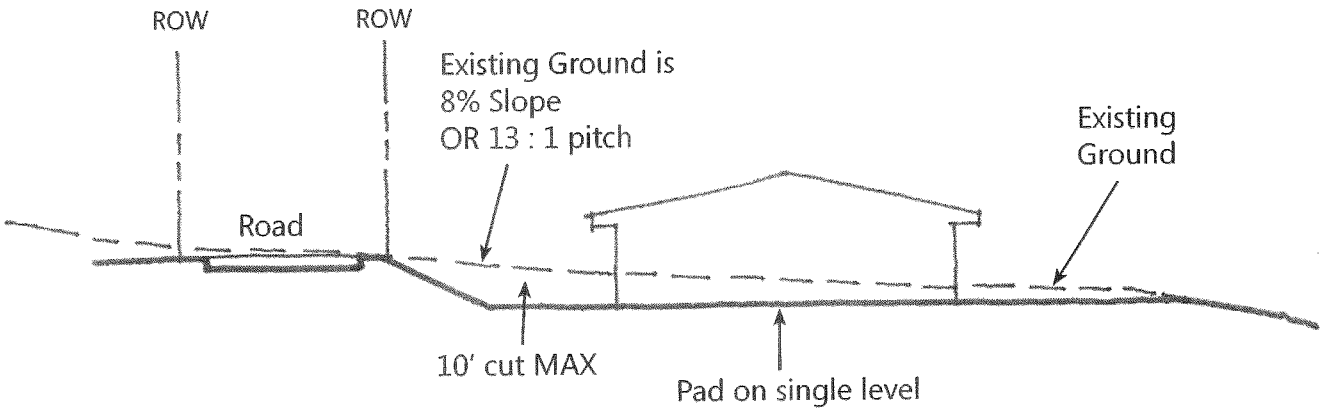
Exhibit 4



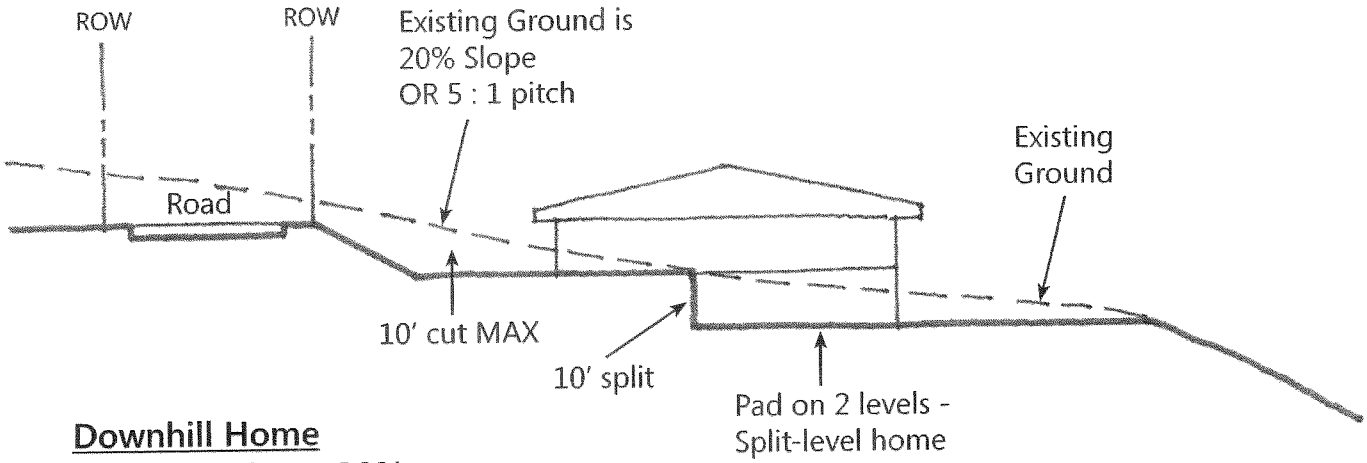
Lot Disturbance Area - Typical

Exhibit 5

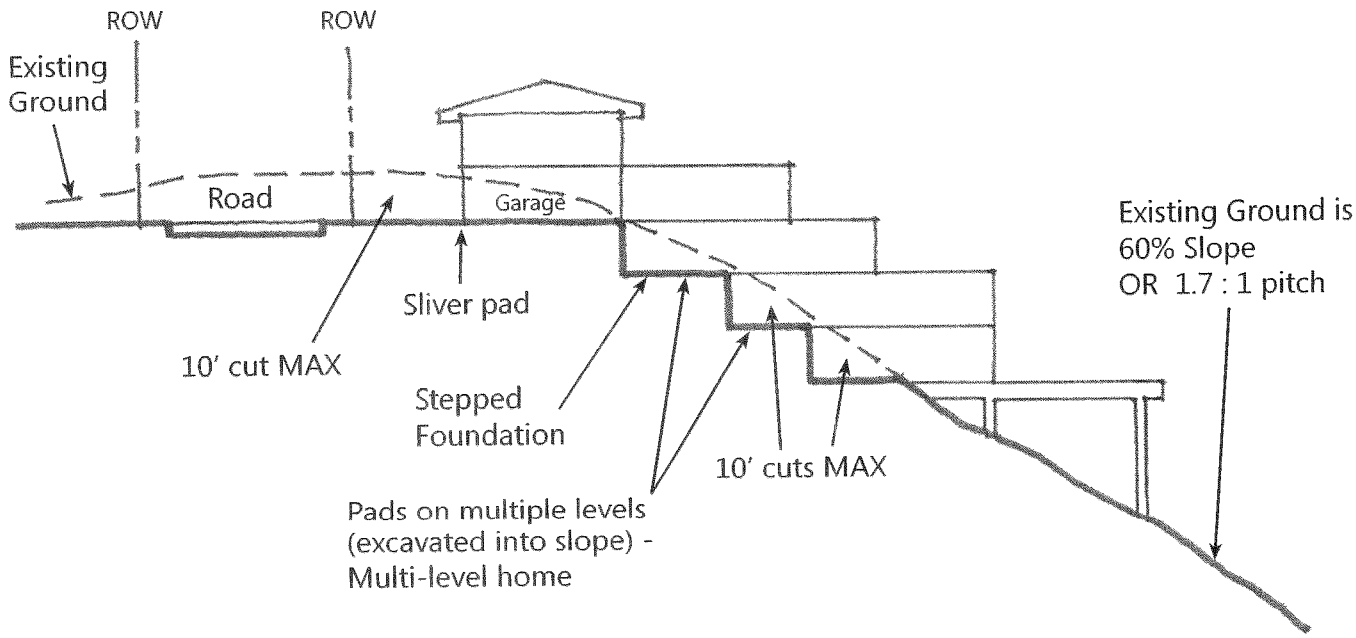
Conventional Flat Pad
Gentle Terrain - 0-10%



Split Pad Lot - Split-Level Home
Rolling Terrain - 10-30%



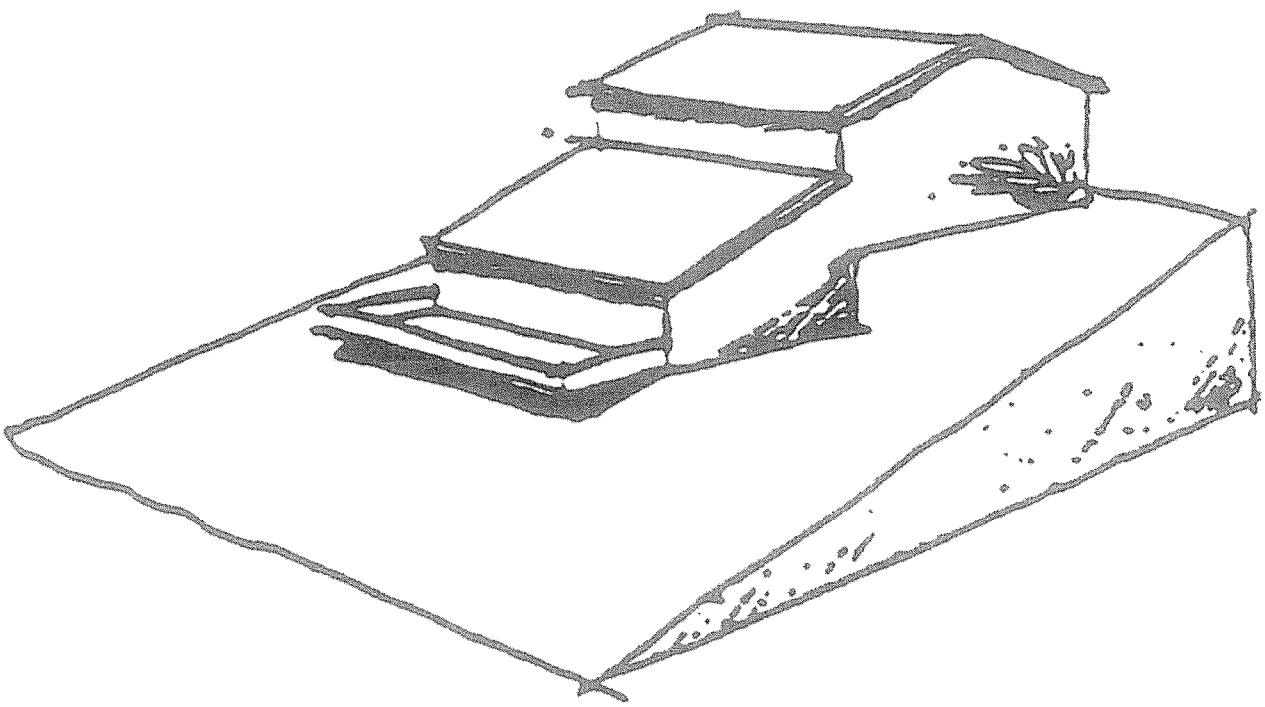
Downhill Home
Steep Terrain - >30%



Building Site Types and Terrain - Typical Conditions

Exhibit 6

The F/TSP Development and Design Guidelines encourage the use of split pad configurations - "Split pads, stepped footings and grade separations are strongly encouraged in order to permit structures to step up or down the natural slope."
(Source - F/TSP, page IV-12, Section E 1.0 d (1))



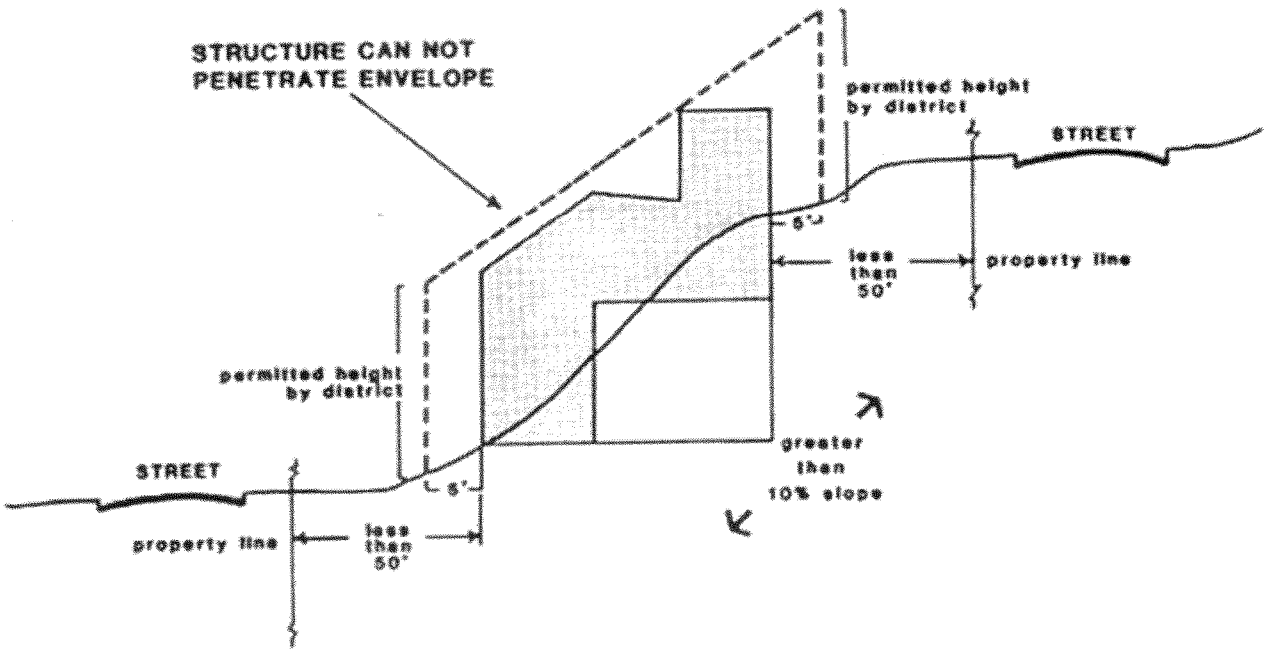
Split Pad Configuration
F/TSP Development and Design Guidelines

Exhibit 7

Diagram For Building Height

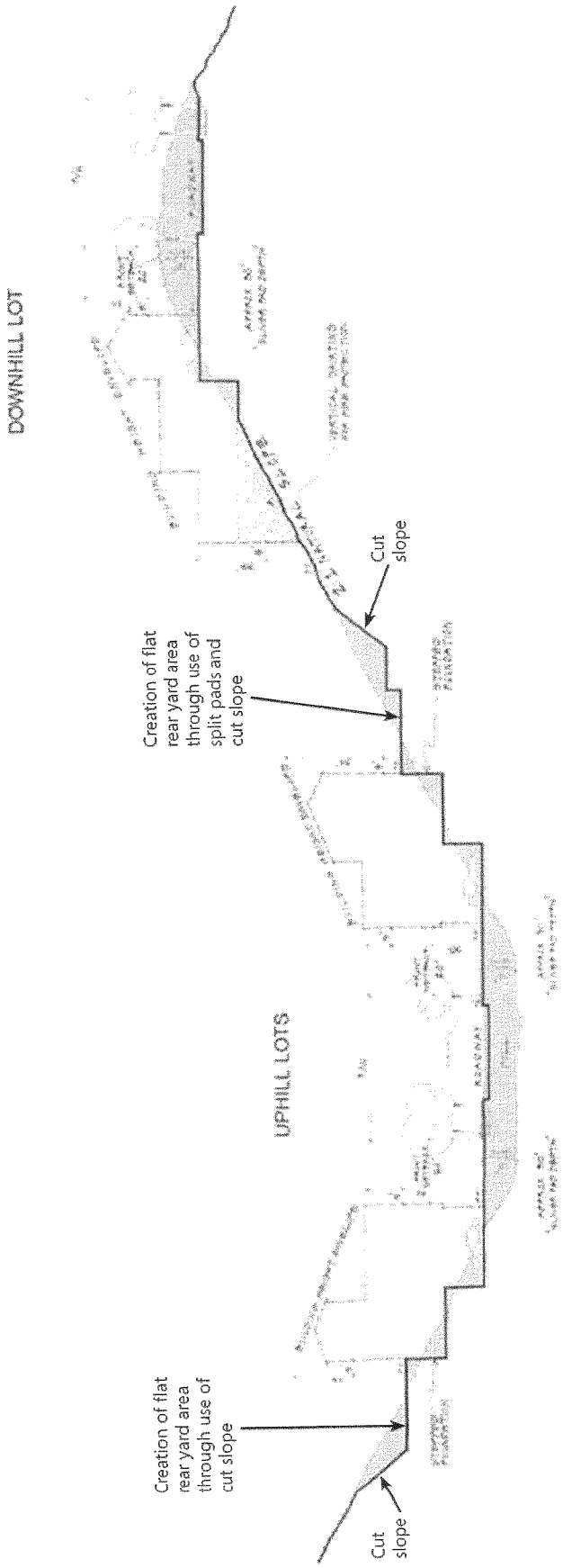
case (a)

(INFORMATION ONLY)



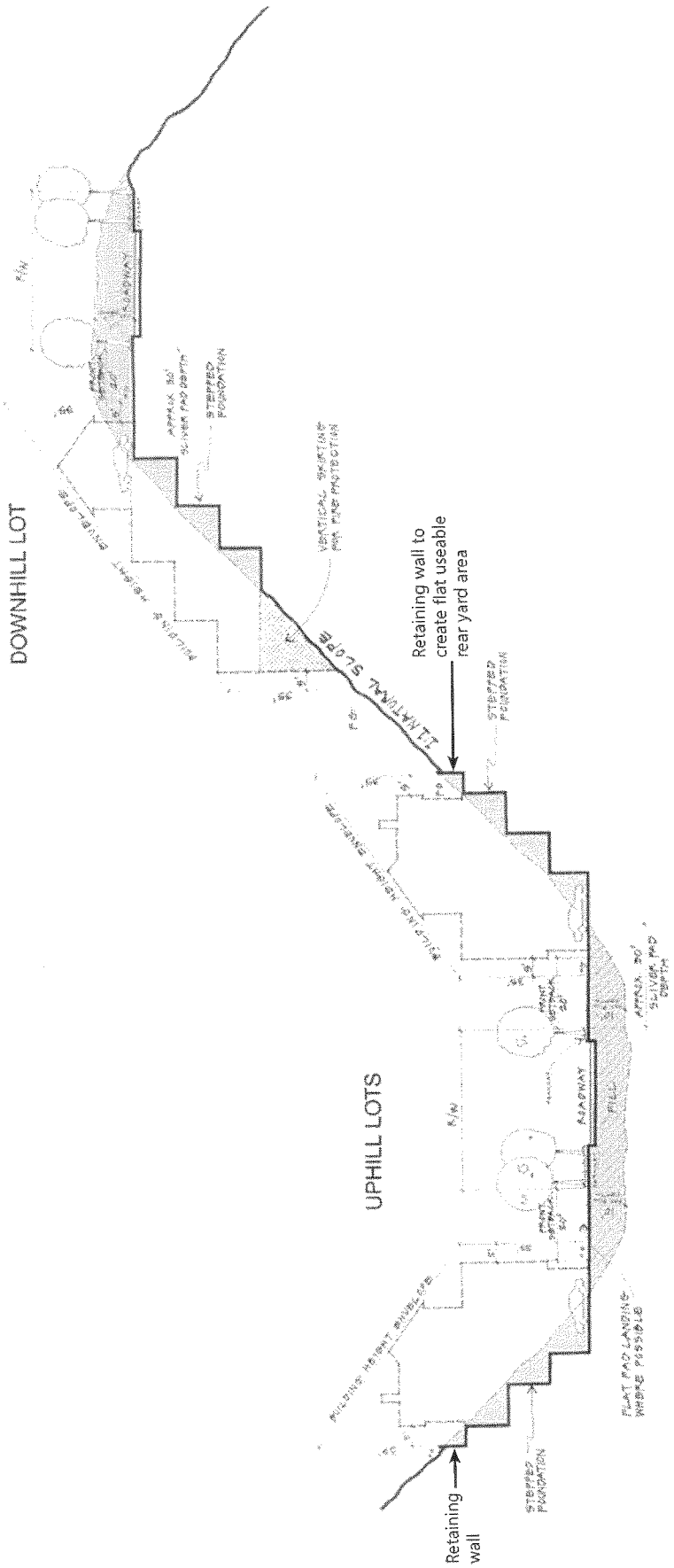
ALL MEASUREMENTS FROM FINISH GRADE ELEVATION

The permitted building envelope (above), because of the way it is defined, generally runs parallel to the angle of the slope, and in doing so controls the massing of the structure (house). The floors of the structure can be built only so far out away from the slope face before penetrating the envelope. To achieve adequate square footage for the house and avoid penetrating the envelope, the floors are forced down-slope or up-slope onto multiple levels. This creates the multi-level pads and home typical of uphill and downhill homes.



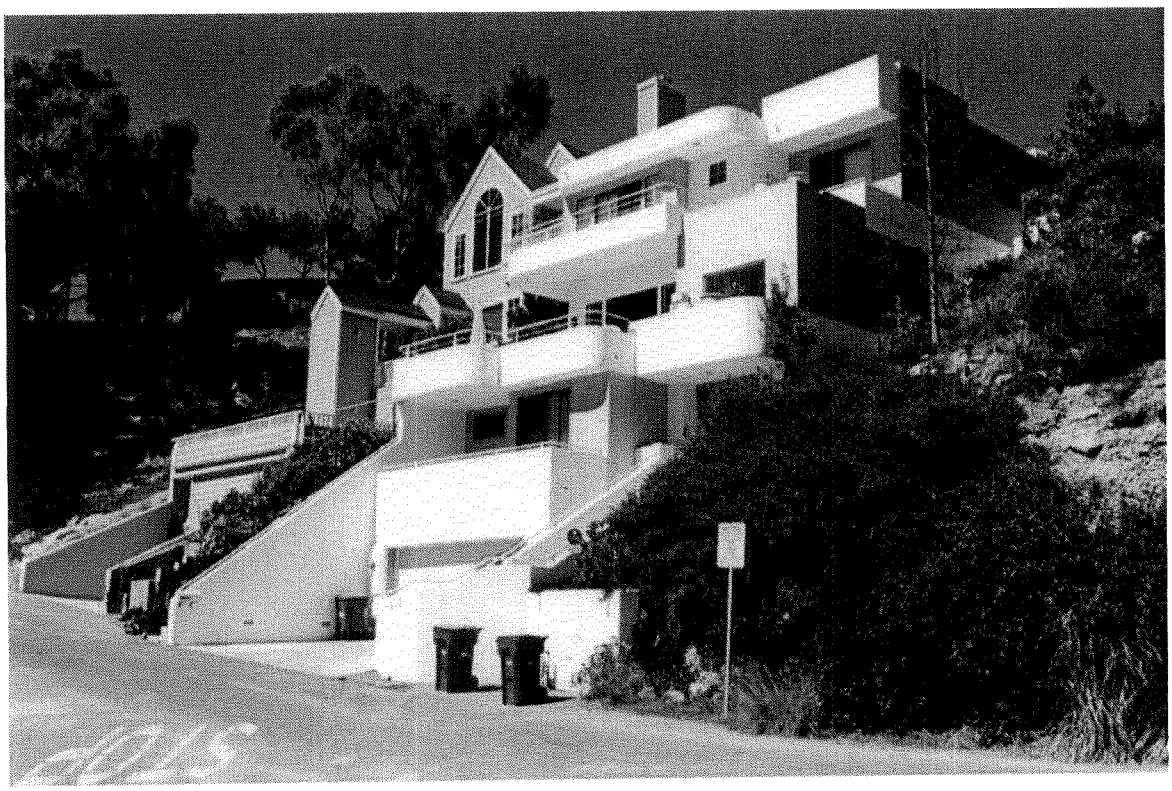
Uphill / Downhill Lot Configuration - 2:1 Natural Slope

Exhibit 9



Uphill / Downhill Lot Configuration - 1:1 Natural Slope

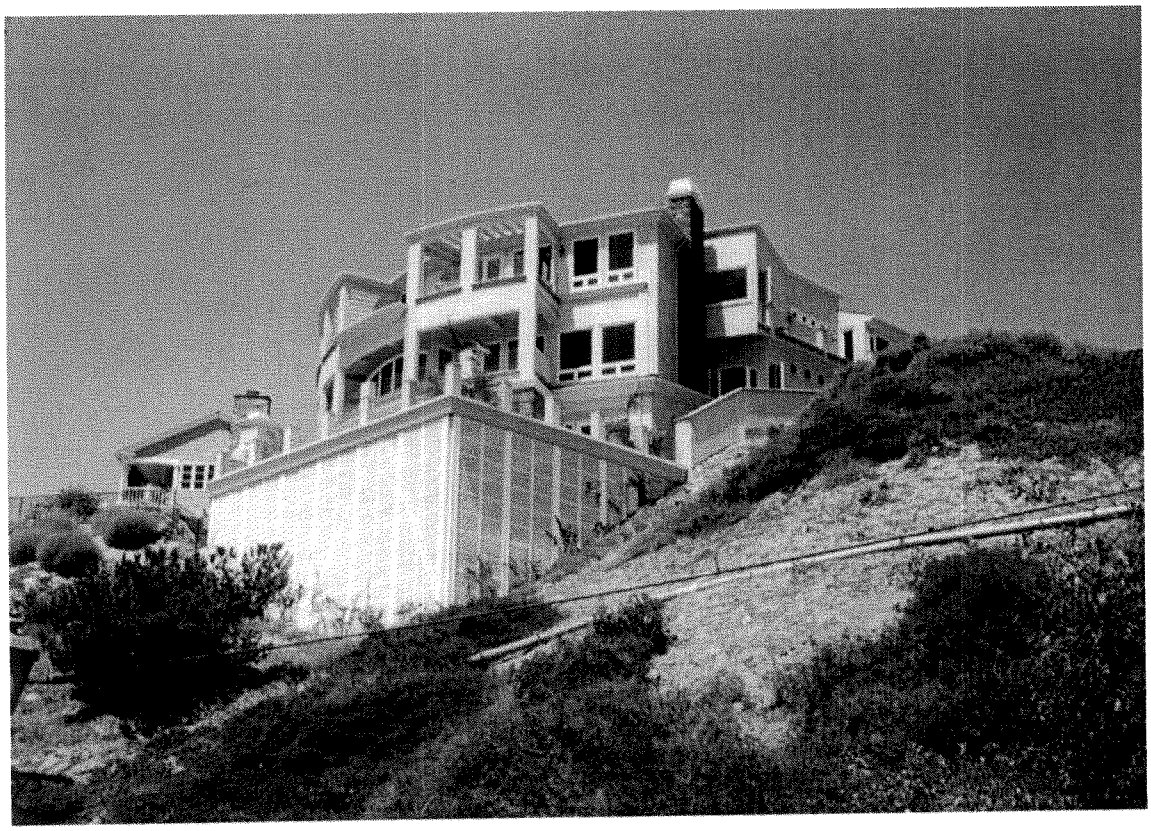
Exhibit 10



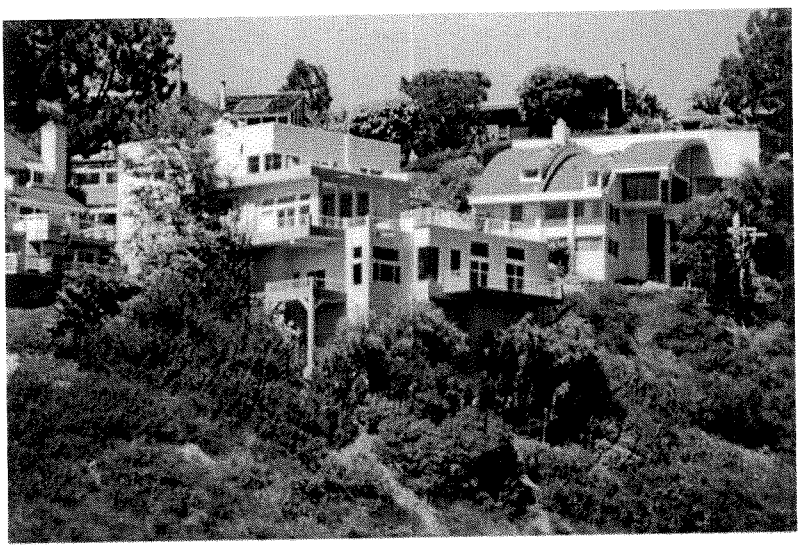
Uphill homes supported by stepped foundations built into natural slope, with excavated floors

EXAMPLE CONDITION
Uphill Home - Stepped Foundation

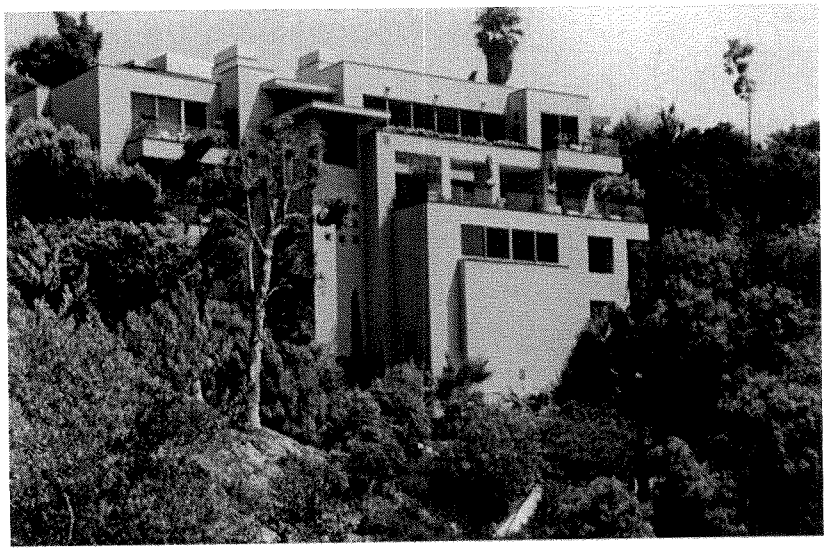
Exhibit 11



Downhill home on stepped foundation, with patio/deck on poles/stilts, and fire skirting below

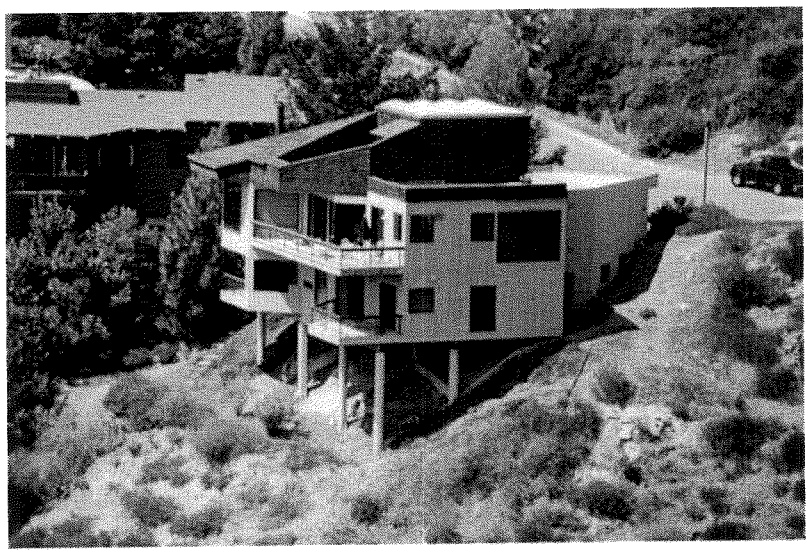


Downhill home supported by stepped foundation built over slope

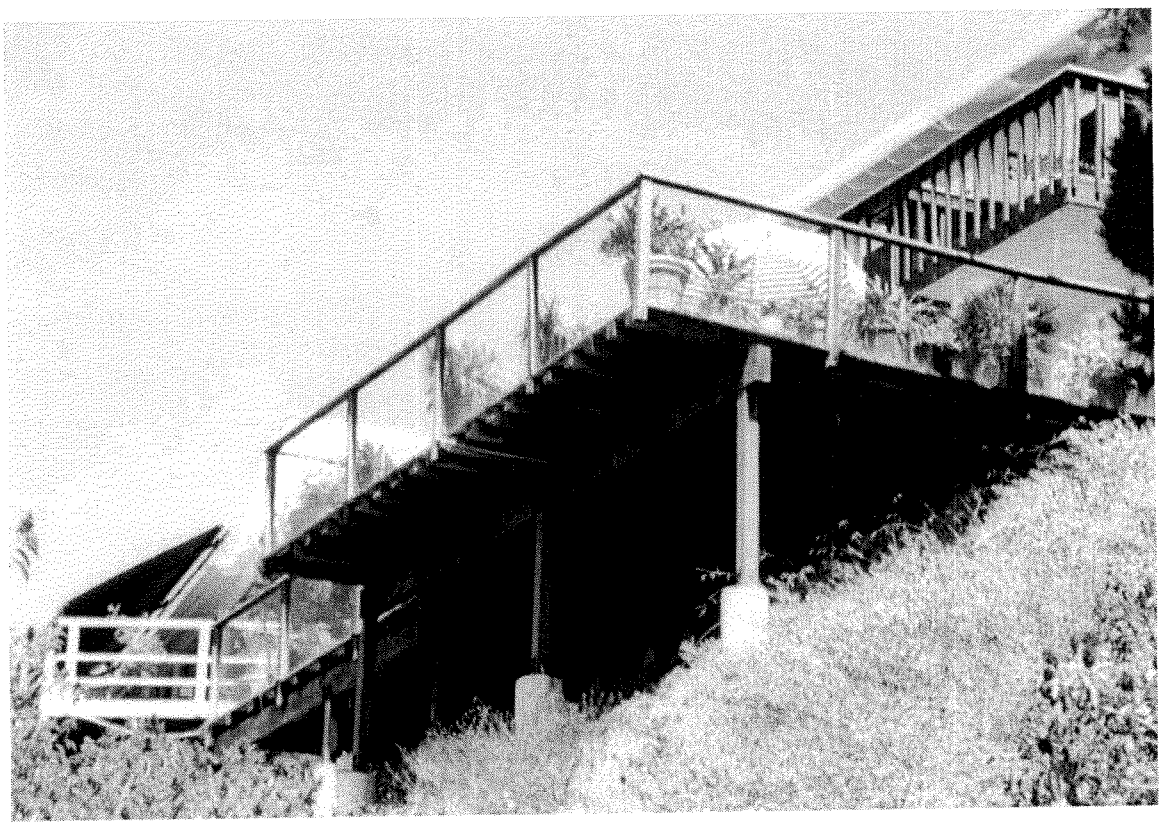


Downhill home supported by stepped foundation
built over slope

Downhill homes supported by stepped foundation
built over slope, with excavated floors. Home in foreground
shows stepped foundation under construction (forms).



Downhill home supported by stilts/poles on piles/caissons embedded into slope

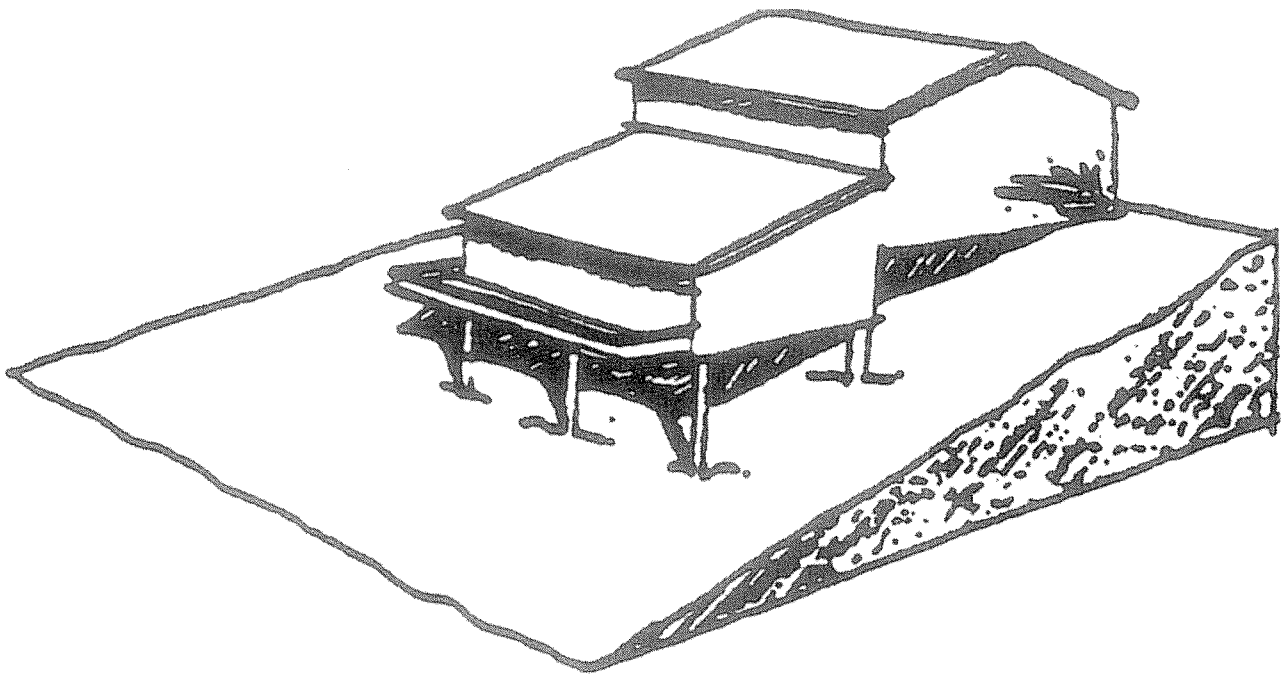


Downhill home with deck on posts

EXAMPLE CONDITIONS
Downhill Homes - Stilts / Poles

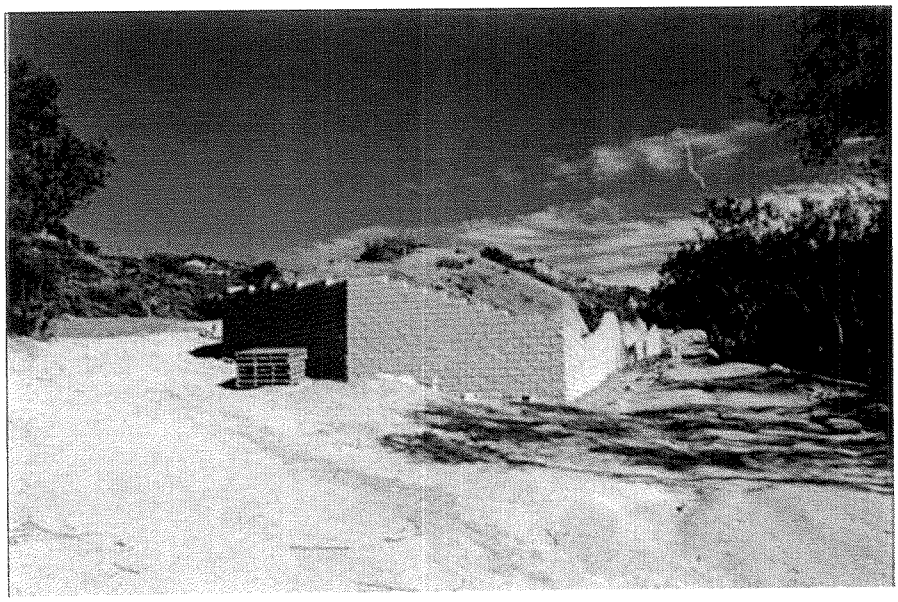
Exhibit 14

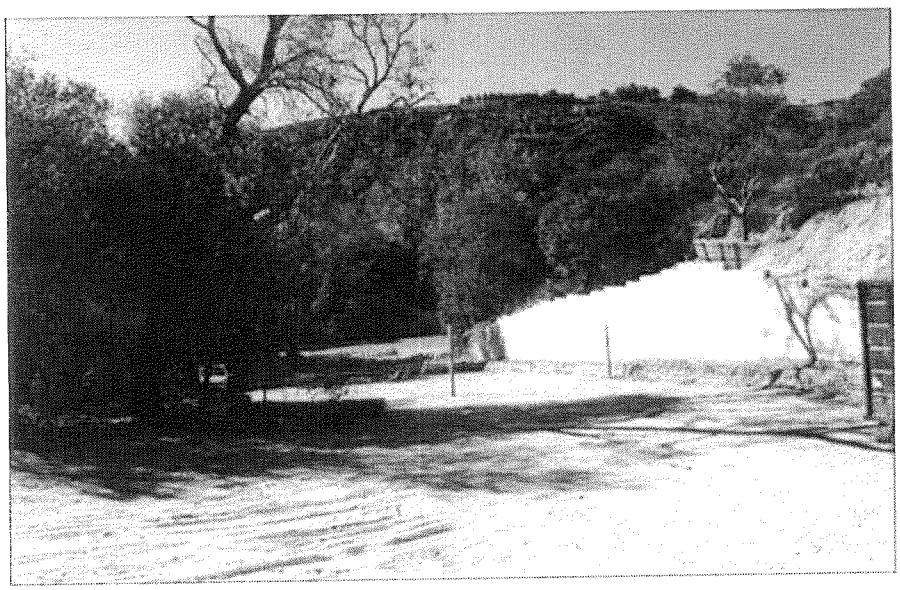
The F/TSP Development and Design Guidelines encourage the use of stilts/poles and stepped foundations - "Split pads, stepped footings and grade separations are strongly encouraged in order to permit structures to step up or down the natural slope."
(Source - F/TSP, page IV-12, Section E 1.0 d (1))

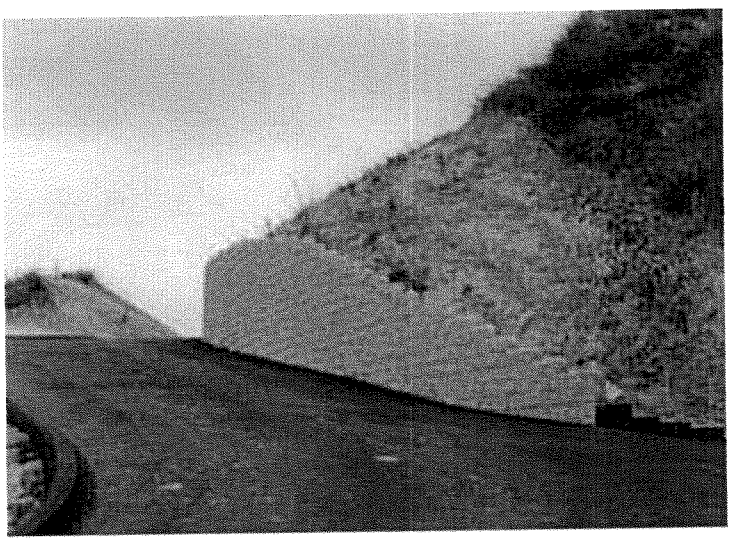


Downhill Home - Stilts / Poles and Stepped Foundation
F/TSP Development and Design Guidelines

Exhibit 15

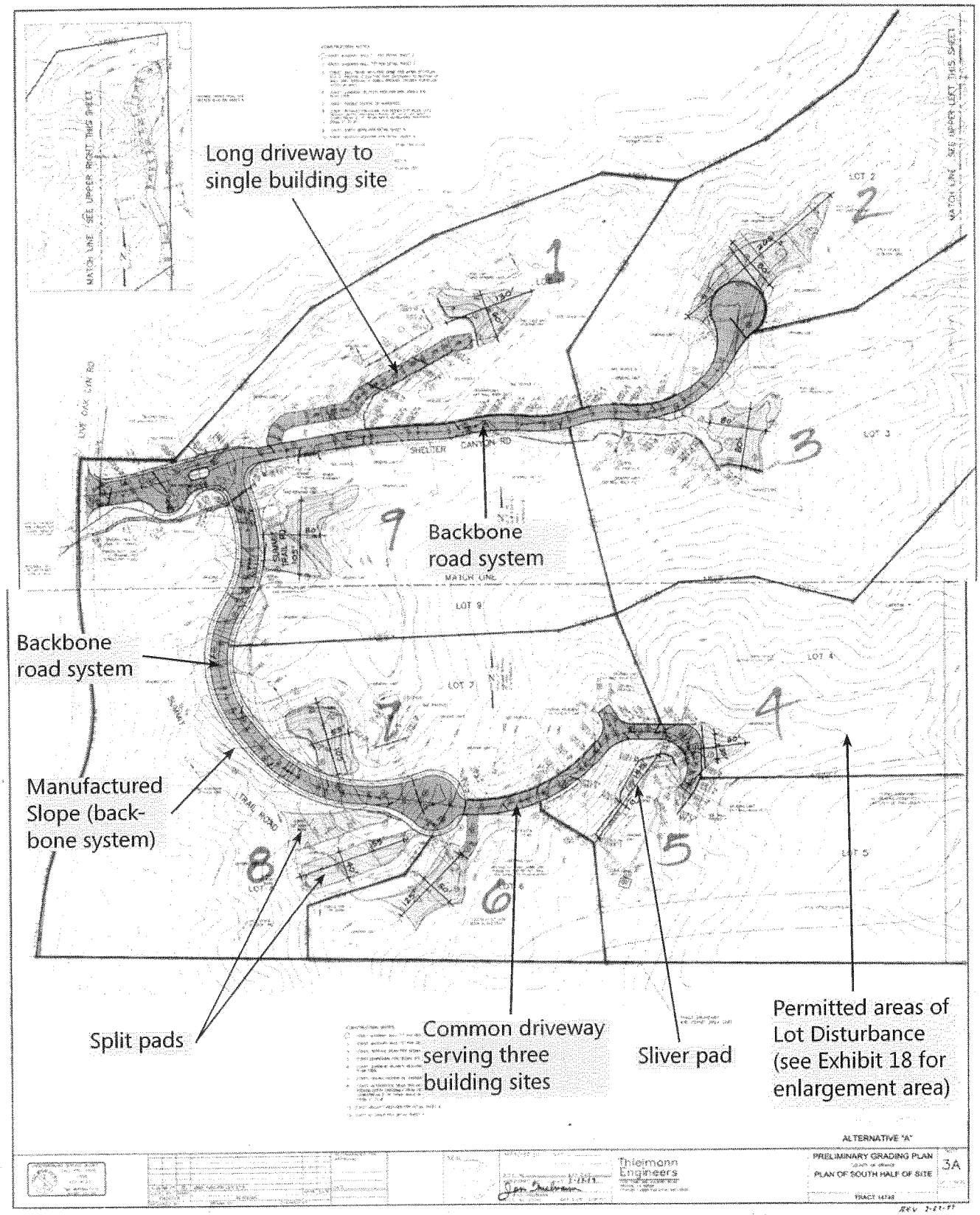






Use of Retaining Walls Adjacent to Roads - The Oaks at Trabuco

Exhibit 16



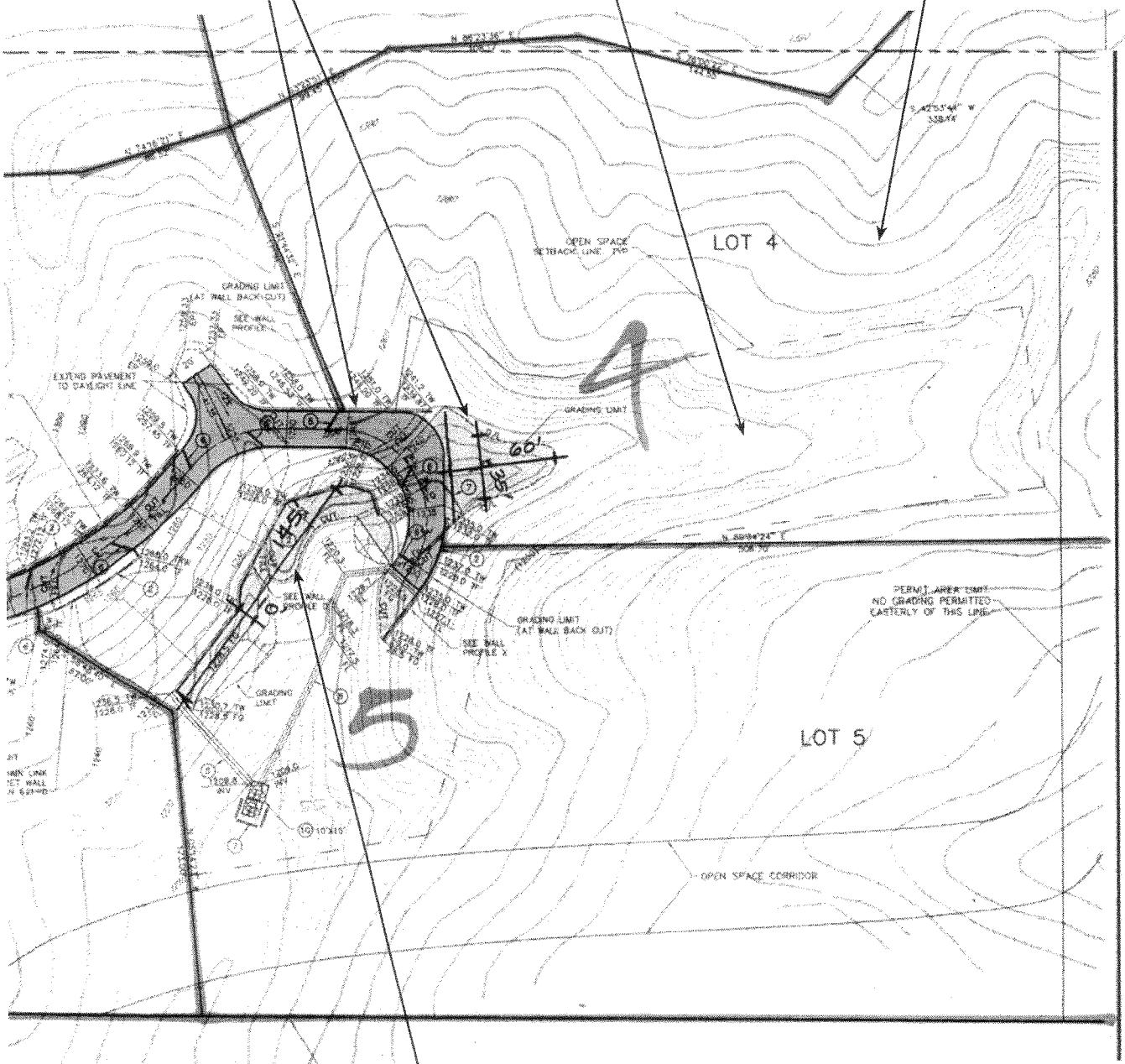
The Oaks at Trabuco project demonstrates the use of a backbone system of roads, pads, and slopes, as well as sliver pads and split pads in steeper terrain, and defined lot disturbance areas.

The Oaks at Trabuco - Preliminary Grading Plan **Exhibit 17**

Limit of backbone grading disturbance (roads, pads, slopes, etc.)

Area of permitted lot disturbance is defined on a lot-by-lot basis (shown inside yellow boundary)

Area on private lot preserved as natural open space



Example of sliver pad provided as part of backbone system of roads, pads, and slopes

The Oaks at Trabuco - Typical Lot Disturbance Area

Exhibit 18